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REEL # 174

GUNINA, A.I.

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Mechanism of the antidotal action of methemoglobin in hydrogen sulfide poisoning. I. A. Olvin and A. I. Gupha, *Farmakol. i Toksikol.* 3, No. 6, 69-72 (1940).—Dogs given 3 times the lethal dose of Na_2S do not die if also given 0.02 g. NaNO_2 per kg. of body wt. intravenously. A prompt rise in methemoglobin content follows the NaNO_2 injection.

114

The antidotal action of methemoglobin is exerted, not as an acceptor (no sulfmethemoglobin could be detected spectrographically), but as an oxidizing agent.

William F. Smith

ASD SLA INTERNATIONAL LITERATURE CLASSIFICATION

CN

HP

H₂S in exhaled air. A. I. Gunna. 1940. Group
Ind. Med. 14, No. 1, 119-20(1947). In exhaled air, it is
impossible to detect H₂S by any of the conventionally
known methods. The amt. present (if any) must be less
than 6 g per hr. The same is true of subjects immersed in
H₂S-contg. baths (H₂S - 180 mg/l.). G. M. K.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

STEEL DIVISION

RESEARCH DIVISION

INDUSTRIAL DIVISION

RESEARCH DIVISION

INDUSTRIAL DIVISION

CA

HA

Acute H₂S poisoning. A. L. Gwinne--*Formidol*, 1
Toxicol. 6, No. 5, 32-5 (1943).--Rosenacker's theory
 (C. A. 33, 2245) in which the mechanism of H₂S poisoning
 lies on its interaction with respiratory enzymes is not sup-
 ported by the present data. During prolonged intrave-
 nous injection of Na₂S into dogs (0.2 mg./kg. body wt. in
 1 min., $\frac{1}{10}$ the absolute fatal dose) no change is observed
 in the O content of the venous blood. An injection of 1.7
 mg./kg. causes the content to rise owing to increased cir-
 culation rate rather than hypoxia. That an increased ci-
 culation rate can lead to higher O contents of the venous
 blood is shown by the fact that there is a concurrent rise in
 the venous O content with a rise in circulation time as
 measured by the method of Refo, and that the injection
 of 50 γ /kg. of adrenaline results in a rise in the O content
 of venous blood.

H. L. Williams

| PROCESSES AND PROPERTIES INDEX | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--|--|--|--|--|--|
| 1ST AND 2ND ORDERS | | | | | | | | | | | | | 3RD AND 4TH ORDERS | | | | | | | | | | | | |
| Theory of acute hydrogen sulfide poisoning. I. V. Olyn, A. I. Ginnin, and V. I. Olyn. <i>Dokl. Akad. Nauk SSSR</i> , 19, No. 11, 7 (1955); cf. C. I. 39, 1257. The pathogenesis of H ₂ S poisoning is not identical to that of HCN, as postulated by Rohdendorf and others, since tissue respiration is not as markedly affected by H ₂ S. The appearance of a short-lived increase of O ₂ in the venous blood during acute H ₂ S poisoning is not the result of suppression of tissue respiration, but is due to an increase of blood pressure; the same effect is produced by adrenaline. The direct action of the H ₂ S on the central nervous system is the cause of death. H. Priestley | | | | | | | | | | | | | | | | | | | | | | | | | |
| A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION | | | | | | | | | | | | | | | | | | | | | | | | | |
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GUNINA, A. I.

(3)
 ✓ Hydrogen sulfide assays in human blood after taking sulfur baths. A. I. Gunina and V. A. Tikhonravov (I. V. Stalin Inst., Sochi). *Farmakol. i Toksikol.* 16, No. 6, 46-9 (1953).—Blood H_2S was detected from the 3rd min. after entering S baths contg. 200 mg./l. free and 400 mg./l. total H_2S . Blood H_2S ranged from 0.03 to 1.8 γ /l., and the varying rates of absorption are significant as to mechanism of S bath action. In the more dil. baths, up to 150 mg./l., oxidation is fast enough to keep free H_2S out of the blood; hence it hardly occurs in the usual S waters with 100-150 mg./l. Exposure to 295 mg./l., 150 min. at 36°, gave up to 0.21 γ /l. in the blood; 18 min. at 39-40.6° up to 0.1 γ /l.
 Julian F. Smith

OYVIN, I.A.; GUNINA, A.I.; TIKHONRAVOV, V.A.

Mechanism of the physiological action of hydrogen sulfide
(Matsesta) water. Vop.kur.fizioter. i lech.fiz.kul't.
no.2:13-20 Ap-Je '55; (MLRA 8:8)

1. Iz biokhimicheskoy laboratorii Bal'neologicheskogo insti-
tuta imeni Stalina i eksperimental'noy laboratorii Tsentral'-
nogo sanatoriia imeni Voroshilova (Sochi)

(MINERAL WATERS, effects,
hydrogen sulfide water, mechanism of physiol.
action)

17-00000, F.I.L.
ANDRIASYAN, G. K.; GUMINA, A. I.; MALKIN, I. I.

Therapeutic use of highly concentrated Matsesta water in skin diseases.
Vest. ven. i derm. no.5:33-36 S-0 '55. (MIRA 9:1)

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo bal'neologicheskogo
instituta imeni I. V. Stalina Ministerstva zdravookhraneniya SSSR
(dir. N. P. Vladimirov) i sanatoriya Moskva (glavnyy vrach A. A. Syrtsova)
(SKIN, diseases,
balneother., Matsesta waters in high concentration)
(BALNEOLOGY, in various diseases
skin dis., Matsesta water in high concentration)

GUNINA, A.I.

Conversion of hydrogen sulfide H_2S^{35} in the organism following subcutaneous administration [with summary in English] Biul. eksp. biol. i med. 43 no.2:48-51 P '57 (MLRA 10:5)

1. Iz biokhimicheskoy laboratorii (zaveduyushchiy-starshiy nauchnyy sotrudnik A.I. Gunina, nauchnyy rukovoditel'-professor I.A. Oyvin) Sochinskogo instituta revmatizma (direktor-dotsent N.P. Vladimirov). Predstavlena deystvitel'nyy chlenom AMN SSSR S.V. Anichkovym.

(SULFIDES, metabolism,

hydrogen sulfide, conversion in rats after subcutaneous admin.) (Rus)

GUNINA, A.I.

"Transformation Within an Organism of Hydrogen Sulfide (H_2S^{35}) Introduced Into the Blood," by A. I. Gunina, Sochi Institute of Rheumatism imeni I. V. Stalin, Doklady Akademii Nauk SSSR, Vol 112, No 5, 1957, pp 902-904 ✓

Hydrogen sulfide is formed in the digestive tract from several sulfur-containing amino acids and rapidly absorbed into the blood stream. A number of investigators have shown that the organism is freed of hydrogen sulfide by the following methods: release from the lungs in unchanged form, and oxidation in the blood with subsequent excretion of the transformed products in the urine.

For a more detailed explanation of the above problems, the author set up experiments using Na_2S^{35} . In studying the distribution of S^{35} in the organs one hour after the administration of Na_2S^{35} , it was found that the greatest specific activity was in the kidneys and secondarily in the lungs.
(U)

SUM-1374

GUNINA, A.I.

Changes in blood carboanhydrase activity in persons taking hydrogen sulfide. Vop.kur.fizioter. i lech.fiz.kul't. 23 no.1:8-11 '58.

(MIRA 11:3)

1. Iz biokhimicheskoy laboratorii (zav. - starshiy nauchnyy sotrudnik A.I.Gunina) Nauchno-issledovatel'skogo bal'neologicheskogo instituta imeni I.V.Stalina v Sochi (dir. - dotsent N.P.Vladimirov)
(MINERAL WATERS, SULFUROUS--PHYSIOLOGICAL EFFECT)
(CARBONIC ANHYDRASE)

GUNINA, A.I.

Study of the transformation of S ³⁵-hydrogen sulfide in the body during hydrogen sulfide baths. Vop. kur., fizioter. i lech. fiz. kul't. 24 no. 4:328-332 J1-Ag '59. (MIRA 13:8)

1. Iz biokhimicheskoy laboratorii (zav. A.I. Gunina, nauchnyy rukovoditel' - prof. I.A. Ovin) Sochinskogo instituta revmatizma im. I.V. Stalina (dir. - dotsent N.P. Vladimirov).
(HYDROGEN SULFIDE--PHYSIOLOGICAL EFFECT)

BORISOVA, T.P.; GONINA, A.I. (Sochi)

Effect of hydrogen sulfide inhalations on the conditioned reflex activity and carbohydrase of the blood in children with rheumatic fever. Vop. kur. fizioter. i lech. fiz. kul't. 28 no.3:255-259 My-Je '63. (MIRA 17:5)

GURINA, L. N.

Experiment of the kolkhoz "Krasnyi kollektivist" in breeding cattle. Moskva, Znanie, 1952. 31 p.

GUNINA, V.

Time permits. Sov. shakht. 12 no.6:39 Je '63. (MIRA 16:9)

1. Zaveduyushchaya neshtatnym otделom Prokop'yevskogo gorodskogo komiteta professional'nogo soyuza rabochikh ugol'noy promyshlennosti.

(Coal miners) (Prokop'yevsk region—Trade unions)

GUMINSKI, I.

GUMINSKI, I. Improving the construction of the spinning bobbins. p. 39.

Vol. 5, No. 5, 1956.

LEKA PROMISHELENOST.

TECHNOLOGY

Sofia, Bulgaria

So: East European Accession, Vol. 6, No. 3, March 1957

GUGUSHVILI, P.V.; GUNIYA, A., red.; SARKISYAN, L.N., red.izd-va;
TODUA, A.R., tekhred.

[Sericulture in Georgia and Transcaucasia in the 19th and 20th
centuries] Shelkovodstvo v Gruzii i Zakavkaz'e v XIX-XX vv.
Tbilisi, Izd-vo Akad.nauk Gruzinskoi SSR, 1960. 105 p.

(MIRA 13:11)

(Georgia--Sericulture) (Transcaucasia--Sericulture)

KHASIA, B.A. [Khasia, Bekirbi Archilovich]; GUNIYA, A.L., red.; MACHABELI, M.G., red.izd-vs; DZHAPARIDZE, N.A., ~~tekh.n.red.~~

[Expanded production on tea-growing state farms in Georgia]
Rasshirennoe vosproizvodstvo v chalnykh sovkhovakh Gruzinskoi
SSR. Tbilisi, Izd-vo Akad.nauk Gruzinskoi SSR, 1959. 165 p.
(MIRA 13:3)

(Georgia—Tea)

GUNIYA, A.L.; GAMKRELIDZE, S.P., red.; KHASINA, B.A., red.;
SARKISYAN, L.N., red. izd-va; KONDRATENKO, N.V., red.
izd-va; DZHAPARIDZE, N.A., tekhn. red.

[Replacement of the labor force in the industry of the
Georgian S.S.R.] Vosproizvodstvo rabochei sily v promyshlen-
nosti Gruzinskoi SSR. Tbilisi, Izd-vo Akad. nauk Gruzinskoi
SSR, 1961. 522 p. (MIRA 15:4)
(Georgia--Labor supply)

GUNIYA, P.T.

Work at Georgian hatcheries in raising chickens for meat production.
Ptitsevodstvo 9 no.6:22-23 Je '59. (MIRA 12:10)

1. Direktor Tbilisskoy inkubatorno-ptitsevodcheskoy stantsii.
(Georgia--Poultry)

Def. at Tbilisi State U.

789. Гуден Сергей Уманович. Промышленные перспективы развития фронтов на основе теоретиче-ского метода проф. И. А. Кибла. Арх. 1941. 93 с.
Заг. 1943, 211.
790. Кацашвили Нана Ала-сеевна. Изучение характера споро-вых солнечносточных морских гор-izontalной составляющей течения ма-гнитного поля это для дод. для Тбили-си (Кавказ - Душети). 1950. 85 с. 20 ил. (Тб. гидроустрой. инст.).
Заг. 1950, 204.
791. Доминидзе Василий Пав-лович. О динамике течения центра-листных тисофер. 1946.
Заг. 1947, 231.
792. Малах-Зиде Алабас Аб-ас Кудам Оган. Широкое поле Кас-пийского моря. С. 122, с. рис. 7 ил. А. де-вал. 1943. 122 с. (Изд. АН АССР ССР 1943. № 9).
Заг. 1946, 301.
793. Микадзе Григорий Дми-триевич. Новый метод количествен-ной интерпретации аномалий зем. теле-сти. 1953. 47 с. 50 ил.
Заг. 1956, 261.
794. Мизаберидзе Валериям Силиастрович. Некоторые резуль-таты исследования магнитного поля Кол-каской наклонности. 1954. 96 [6] с. (Изд. геофиз. АН Груз. ССР).
Заг. 1954, 246.
795. Мурусидзе Георгий Ян-мович. Опыт применения комбина-ционного метода сейсмической разведки для исследования глубинных струк-тур земной коры. 1955.
Заг. 1955, 176.
796. Пацгула Сосо Кавка-сели. Изучение электромагнитного по-ля в земной коре для случая взаимно пер-пендикулярных проводящих слоев. 1954. 40 с. 7 ил. 48 таб. (Изд. геофиз. АН Груз. ССР).
Заг. 1956, 284.
798. Герасимов Валентин Иванович. Опыт и сравнения с прогноза погоды по сейсмической специ-альной информации. 1948. 119 с. ил. Аном. 1941.
Заг. 1951, III.

Disertation for degree of
Candidate Physical-Mathematical Sciences

GUMIYA, S. U.

27003

Prelychislenie Tempatury V Svobodnoy Atmosfere, Trudy (Gruz. Politekh. In-t Im.
Kir Ova) No. 18, 1949, S. 3-8- Rezyume Na Gruz. Yaz.

SO: LETOPIS NO. 34

GUNYA, S.U.

Role of humidity, temperature, and certain features of atmospheric circulation processes in the formation and development of thunderstorms. Trudy Tbil. NIGMI no.2:68-77 '57. (MIRA 11:4)
(Thunderstorms)

[illegible]

Гуниа, С. У.

AUTHOR:

Khmaladze, G. N.

50-1-25/26

TITLE:

The Scientific Session of Tbilisi Scientific Research
Institute for Hydrometeorology. (Nauchnaya
sessiya Tbilisskogo NIGMI)

PERIODICAL:

Meteorologiya i Gidrologiya, 1958, Nr 1, pp. 66-67 (USSR)

ABSTRACT:

In May 1957 this institute held its fourth scientific session, where 16 lectures devoted to various branches of the hydrometeorological science were held. Under the conditions of Transcaucasia the problem of the forecast of thunderstorms is of great practical importance, therefore special attention was paid to the lecture by Guniya, S. U. on the method of forecasting thunderstorms under the mountainous conditions of Transcaucasia and the lecture by Shishkin, N. S. (Main Geophysical Observatory) on the topic of the forecast of thunderstorm-processes according to the method of layers. Papinashvili, K. I., Napetvaridze, Ye. A. and Lominadze, V. P. dealt with the problems of the investigation and subdivision of the air- and turbulence-currents above Transcaucasia. Vorontsov, P. A. reported on some peculiarities of the temperature- and wind-conditions above the lake Sevan.

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The Scientific Session of Tbilisi Scientific Research
Institute for Hydrometeorology.

50-1-25/26

Kvaratskheliya, I. F., Tsutskiridze, A. Ya. and Kurdiani, I. G. (State University Tbilissi) reported on the results of their works in the field of the aeroclimatic characteristic of the free atmosphere, on the analytical method of the treatment of observations with pilot balloons and distribution of clouds in Georgia.

Chirakadze, G. I. and Cigineyshvili, V. M. explained the scheme of the radiation method of plotting the slipperiness of ice in Transcaucasia and the characteristic of slush and its distribution in Transcaucasia. Khmaladze, G. N., Tsomaya, V. Sh. and Poklepa, V. F. reported on the duration of the vernal-aestival floods in the rivers of Transcaucasia and on the method of their calculation as well as on the method of the determination of the water supplies in the snow according to given records of snow routes.

Tsertsvadze, Sh. I. held a lecture on the method of forecasting the main phenophases of grapes in Georgia.

Svanidze, V. F. - on the characteristic of the agro-meteorological conditions of the cultivation of potatoes, various conditions of the cultivation of potatoes, various terms for planting in the low grounds of valleys of East Georgia.

Card 2/2
AVAILABLE:

- Library of Congress
1. Weather forecasting
 2. Meteorology

3(7)

AUTHOR:

Guniya, S. U.

SOV/50-58-10-1/20

TITLE:

The Passing Over of Mountain Ranges by Air Currents
(Perevz'vaniye vozdushnykh potokov cherez gornyye khrebt'y)

PERIODICAL:

Meteorologiya i gidrologiya, 1958, Nr 10, pp 3-8 (USSR)

ABSTRACT:

The atmospheric processes arising above the area of Transcaucasia are a result of superposition of mainly two kinds of disturbances: 1) One process is formed as a consequence of the thermally irregular basement area (podstilayushchaya poverkhnost') owing to atmospheric processes; 2) the other one is due to unevenness of the earth's surface. The theory of flowing around hindrances by air currents (Refs 3-7) and further investigations (Refs 1,8,9) indicate the extraordinarily important role played by mountain ranges in the formation of local disturbances and in the appearance of vertical components of the wind velocity. This facilitates the formation and development of clouds, thunderstorm processes and causes precipitations. The question whether masses of air are able to pass the Transcaucasian mountain ranges if the masses possess a higher vertical extension than the hindrance itself, is most important to the attendant phenomena of the latter weather processes. According to various computations the author determined the current function $\tilde{\psi}(x,y)$. The equations for the determination of $\tilde{\psi}$ in the middle level

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The Passing Over of Mountain Ranges by Air Currents

SOV/50-58-10-1/20

of the troposphere were solved for 40 places in the Caucasus region under consideration of the influence exerted by mountain ranges. For the calculations a high-speed computer of the Institut tochnoy mekhaniki i vychislitel'noy tekhniki AN SSSR (Institute of Fine Mechanics and Calculation Techniques of the AS USSR) was used. On the basis of the calculated values of the function $\tilde{\psi}$ for the cases $u = 0$ and $v = 1$ (the axis X lies along the mountain range, the axis Y lies vertically) as well as for the cases $u = 1$ and $v = 0$ the lines of the current distribution on the middle level of the troposphere over the mountain regions of the Caucasus were drawn (Figs 1,2). As may be seen from them the irregularities of the earth's surface form a disturbance field of the main current which is extended upwards up to 4 - 5 km. An important factor is here the passing over of the ranges by these disturbed currents according to conclusions drawn by former authors (Refs 3-6). These conclusions are confirmed by the occurrence of storm centers over the slopes of the Greater and Lesser Caucasus (Ref 2) and by considerable precipitations in this area. I. A. Kibel' gave valuable advice and indications. S. L. Belousov assisted in the computations on the high-speed computer. -There are 2 figures and 9 Soviet references.

Card 2/2

Лавица, С. У.
3(1) e 2

PHASE I BOOK EXPLOITATION

SOV/3099

Tbilisi. Nauchno-issledovatel'skiy gidrometeorologicheskiy Institut

- Trudy, Vyp. 4 (Transactions of the Tbilisi Hydro Meteorological Scientific Research Institute, No. 4) Leningrad, Gidrometeoizdat, 1959. 178 p. 1,500 copies printed.

Additional Sponsoring Agency: USSR. Soviet Ministrov. Glavnoye upravleniye gidrometeorologicheskoy sluzhby.

Ed. (Title page): V. P. Lominadze; Ed. (Inside book): V. D. Pisarevskaya; Tech. Ed.: N. V. Volkov.

PURPOSE: This book is intended for meteorologists and hydrologists.

COVERAGE: This is a collection of 12 articles on jet streams and turbulent currents, the analysis of the effect of orography on changes in atmospheric pressure, the characteristics of the temperature regime in the free atmosphere, the development of methods of forecasting storms, low cloud ceilings, fogs, water discharges, spring floods and various other hydrometeorological phenomena in the Transcaucasia area. Of particular interest are articles on visibility conditions around Transcaucasian airports the aerosynoptic

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Transactions (Cont.)

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conditions causing air bumpiness in the area. References accompany each article.

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GUNIYA, S.U.

Air currents over obstacles. Trudy Tbil.NIGMI no.5:11-15 '59.
(Caucasus--Winds) (MIRA 13:6)

S/169/61/000/010/026/053

D228/D30.4

AUTHOR: Guniya, S. U.

TITLE: Thunderstorm processes on the territory of Transcaucasia

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 10, 1961, 31-32,
abstract 10B212 (Shromebi. Staliniris sakhelmtsipo
pedagogiuri instituti, Tr. Stalinirsk. gos. ped. in-t,
7, 1959, 13-29)

TEXT: The diversity of the Transcaucasian climate is chiefly caused by the mountainous topography, geographic latitude, and the proximity of the Black and Caspian Seas. The Suramskiy and Arsianskiy Ranges, which stretch perpendicularly to the direction of moist air flow from the west, have an especially great significance. These ranges divide Georgia into two separate climatic regions--western and eastern. The moisture-rich airmasses encroaching from the west bring abundant precipitation (from 1500 to 2500 mm per annum) to Western Georgia, principally on the coast

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Thunderstorm processes...

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of the Black Sea. Reaching the Suramskiy and Arsianskiy Ranges, the airmass remains in their front part; in consequence, precipitation falls on the slopes of the ranges. The crossing of the airmass over the range is often accompanied by the front's erosion, the gradual decrease of cloudiness, and the cessation of precipitation. Thus, airmasses arrive in the eastern part of Transcaucasia in a much less moist state. The formation in the cold front of wave disturbances, which, during their development over Transcaucasia's territory, favor the strengthening of the vertical components of the wind velocity, the enrichment of airmasses by moisture, and the fall of precipitation, often takes place to the south of Transcaucasia. The author cites factual data about thunderstorms on Transcaucasia's territory. The frequency of frontal thunderstorms for Georgia is 10% higher in comparison with intramass thunderstorms: for Armenia and Azerbaydzhan, on the contrary, the frequency of frontal thunderstorms is 14 and 5% lower respectively. The frequency of intramass thunderstorms in coastal districts of Western Georgia and the Kolkhid-skaya Lowlands only reaches 20 - 25%, but in Western Georgia's mountains

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areas, this type of thunderstorm activity increases to 60%. The small amount of intramass thunderstorms in coastal districts and in the Kolkhidskaya Lowlands is explained by local processes, which are strongly developed, especially in summertime. The breezelike phenomena observed over coastal districts of Western Georgia and the Kolkhidskaya Lowlands do not favor the genesis and development of intramass thunderstorm processes. In Western Georgia, thunderstorms are observed in the winter months; the maximum value of the mean-monthly number of days with thunderstorms reaches 1.6 (Otradnoye, January). According to the measure of removal from the Black Sea, the number of days with thunderstorms in the winter months gradually decreases. In Eastern Georgia, Armenia, and Azerbaydzhan, hardly any thunderstorms occur in the winter months. The sharp increase in the average number of days with thunderstorms is observed from April throughout the territory of Transcaucasia. In June, it attains its maximum value and then gradually decreases over most of the territory of Armenia and Azerbaydzhan, reaching a minimum value in November for the territory of Azerbaydzhan and in December for Armenia.

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Over Georgia's territory, a certain decrease in the number of days with thunderstorms is noted in July in comparison with the previous month, together with an increase in August; this indicates the presence of two maxima for the number of days with thunderstorms in Georgia. For Transcaucasia, the least number of days with thunderstorms is observed over the territory of Azerbaydzhan, particularly above the Kurinskaya Lowlands, which is due to the presence of dry steppes with an arid climate. The Tiflis-Akstafa-Baku districts are characterized by an exceptionally small number of days with thunderstorms; this is observed especially in the Yevlakh-Baku areas. The author notes the connection between the local relief and the yearly number of days with thunderstorms. In Georgia, a comparatively small number of days with thunderstorms (chiefly from 25 to 35) is recorded above the Kolkhidskaya Lowlands and the Vnutrenne-Kartalinskaya, Nizhne-Kartalinskaya, and Kakhotinskaya Plains. A considerable increase in the number of days with thunderstorms (from 30 to 60 - 70) is observed in Georgia's mountainous districts and over almost the whole of Armenia's territory. It follows from the data of pilot-

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D228/D304

Thunderstorm processes...

balloon observations over the Krestovyy Pass during May - August, 1949 - 1953, that in the mountainous regions the air-streams have a southerly and south-westerly direction in the evening hours before a thunderstorm. The influence of the topography on the disturbance of air-streams and on the appearance of vertical components of the wind velocity is more abruptly displayed in mountainous country than is the case over the comparatively flat localities of Tiflis and Yerevan. This conclusion is confirmed by the presence of foci of intramass thunderstorms above mountainous areas. The author distinguished the local foci of thunderstorm activity for Transcaucasia's territory. Knowing the time of thunderstorms in the focal areas and the routes of the movement, it is possible to warn certain national-economy organizations about the danger of land buildings being struck by lightning. All cases of nearby thunderstorms observed from May to August of 1949 - 1953--from the moment of formation to their dying out--were studied to expose the routes followed by thunderstorms over Transcaucasia's territory. As research has shown, the travel lines of thunderstorm processes are directed along Transcaucasia's

Card 5/6

Thunderstorm processes...

S/169/61/000/010/026/053
D228/D304

mountain-ranges. This is caused by the presence over the ranges of vertical components of the wind velocity--engendered by irregularities in the ground surface, which strengthen the process of thermodynamic convection--and by the increase in the atmospheric humidity in a direction towards the ranges. As is shown by examination of the maps, the displacement of the frequency maximum for thunderstorms in the coastal zone of the Black and Caspian Seas, and also along the Kolkhidskaya Lowlands, from 13 - 19 hr. to 19 - 01 hr. [Abstracter's note: Could be error for 21 hr.] may be explained by the influence of the basins of the Black Sea and Caspian Sea on the formation of thunderstorm processes. Over the sea, in connection with the establishment of a nocturnal temperature-gradient which favors rapid vertical convection, the thunderstorm maximum is observed at night. [Abstracter's note: Complete translation.]

Card 6/6

PHASE I BOOK EXPLOITATION

SOV/4624

Guniya, S. U.

Grozovyye protsessy v usloviyakh Zakavkaz'ya (Thunderstorm Processes in Transcaucasia) Leningrad, Gidrometeoizdat, 1960. 155 p. 800 copies printed.

Sponsoring Agencies: Glavnoye upravleniye gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR; Tbilisskiy nauchno-issledovatel'skiy gidrometeorologicheskii institut.

Resp. Ed.: V. P. Lominadze; Ed.: T. V. Ushakova; Tech. Eds.: N. V. Volkov, and M. I. Braynina.

PURPOSE: The book is intended for meteorologists. It will also be of interest to engineers and technicians employed in the electric power industry, aviation, and other activities concerned with thunderstorm phenomena.

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Thunderstorm Processes in Transcaucasia

SOV/4624

COVERAGE: The book deals with thunderstorm processes and their territorial distribution. Special attention is paid to those problems which are of practical importance to the aviation and electric power industry in Transcaucasia. The book is divided into three parts. The first part contains investigation of the climatic characteristics of thunderstorms over Transcaucasia. The second part attempts to formulate theoretical foundations to explain the influence of the Caucasus mountains on the formation of thunderstorm processes. The third part presents the characteristics of the basic factors in thunderstorm formation and analyzes methods for forecasting thunderstorms under the local conditions of Transcaucasia. The problems treated in this book were presented by the author at a scientific meeting of the Tsentral'nyy institut prognozov (Central Institute of Weather Forecasting) in the beginning of 1960. The book was considered to be the first substantial contribution to the research on thunderstorm processes under local conditions in Transcaucasia. The results of further investigations will appear in the works of the Tbilisskiy nauchno-issledovatel'skiy gidrometeorologicheskii institut (Tbilisi Hydrometeorological Scientific Research Institute). A supplement lists the names and elevations of 210 meteorological stations in the Gruzinskaya, Armyanskaya, and Azerbaydzhanskaya SSR'. The author thanks I.A. Kibel' and N. V. Lebedevaya. There are 52 references: 47 Soviet and 5 English.

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Thunderstorm Processes in Transcaucasia

SOV/4624

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9. Wind field over Transcaucasia

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Bibliography

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AVAILABLE: Library of Congress
Card 5/5

JA/dwm/fal
12-28-60

139

GUNIYA, S.U.; KHARCHILAVA, F.T.

Synoptic aerological conditions producing showers in Transcaucasia
and the development of methods for their prediction. Trudy
Tbil.NIGMI no.8:10-20 '61. (MIRA 15:3)
(Transcaucasia—Rain and rainfall)

S/169/62/000/012/049/095
D228/D507

AUTHOR: Guniya, S.U.

TITLE: Vertical rate of air movement over Caucasian districts

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 12, 1962, 40,
abstract 123278 (Tr. Tbilissk. n.-i. gidrometeorol.
in-ta, no. 10, 1962, 117-120)

TEXT: Values, calculated for 90 points above the Caucasus, are cited for vertical currents at an average tropospheric level, originating under the influence of mountain ranges when the main flow directions with respect to mountain slopes are different. If the main flow from the Transcaucasian Depression is perpendicular to the southern slopes of the Greater Caucasus and the northern slopes of the Lesser Caucasus, vertical currents reach a maximum (30-48 cm/sec) along the ranges. Above the valleys of the North Caucasus and Transcaucasia, however, they do not exceed 8-10 cm/sec. In constructing prognostic emagrams, allowance for the calculated

Card 1/2

Vertical rate of air movement ...

S/169/62/000/012/049/095
D228/D307

values of vertical currents gives a more realistic picture of con-
vection development than is the case with prognostic emagrams,
constructed with no allowance for vertical currents. ✓

[Abstracter's note: Complete translation]

Card 2/2

GUMIYA, S.U.; SABOKOV, C.P.

Account of mountains and friction in a two-level model for
forecasting the meteorological elements under conditions of
the Caucasus. Trudy ZakNIIGMI no.19:3-12 '65. (MIRA 18:12)

L 38138-56 ENT(1)/FCU Gw/JXT(0.1)

ACC NR: AT6013750

SOURCE CODE: UR/3061/65/000/019/0003/0012

AUTHOR: Guniya, S. U.; Sadokov, V. P.

ORG: none*

TITLE: Evaluation of mountains and friction on a two-level model for the forecasting of meteorological elements in the Caucasus

SOURCE: Tiflis. Zakavkazskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut. Trudy, no. 19(25), 1965. Voprosy gidrometeorologii (Problems in hydrometeorology), 3-12

TOPIC TAGS: atmospheric model, Coriolis force, weather forecasting

ABSTRACT: Pressure, temperature, and vertical movements were investigated on the basis of vortex velocity and heat flow. Equations for vortex velocity, heat flow, and statics are derived in an isobaric coordinate system x, y, ξ , and t , assuming conditions in the atmosphere to be quasigeostrophic, quasistatic, and adiabatic. Equations relating $\phi, \tau, P, l, \frac{dl}{dy} = \beta, R, T, c^2, g, \epsilon, \gamma_a$, and p were solved at $\xi=1, \frac{1}{2}$ and

0 and $p=0, 500$ mb, and 1000 mb, where ϕ is the geopotential, τ is the vertical velocity, P is the standard pressure, l is the Coriolis parameter, R is the gas constant, T is the air temperature, $c^2 = \alpha RT$ for $\alpha \approx 0.1$, g is the force of gravity, γ_a is the

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UDC: 551.54 : 518.5

L 38138-66

ACC NR: AT6013750

vertical temperature gradient, p is the air pressure at the mountain surface, and $\xi=1-p/P$, and assuming that the T , ϕ and $\omega=t/P$ can be expressed as second order polynomials in ξ . The equations are evaluated at times m and $m+1$. The problem was programmed for the BESM-2 computer. The authors express their gratitude to L. A. Kibel, Corresponding member, AN SSSR, for consultations in the present work. Orig. art. has: 53 formulas.

SUB CODE: 08,04/

SUBM DATE: none/

ORIG REF: 003

Card 2/2 // LP

HUNGARY

KUBANYI, Dr. Endre, and*GUOTH, Janos Dr, Department of Surgery No 2 of the Pest Megye Council's Semmelweis Hospital. (Pest megyei Tanacs Semmelweis Korhaz II. sz. sebeszeti osztalya) (Chief Physician: Dr Endre KUBANYI), and *Candidate of the College of Veterinary Medicine (Allatorvosi Egyetem), Budapest.

"Causes of Relapse After Frazier Operation on Trifacial Neuralgia"

Budapest, Magyar Sebeszet, Vol 19, No 3, Jun 1966; pp 145-149.

Abstract: On the basis of histological examination of data from animal experiments it is presumed that the Gasser ganglion has the histological function described by Ferner in 1939. From the clinical point of view it may be imagined that if the preganglionic root of the Gasser ganglion were to be completely sectioned, there may remain intact ganglionic cells situated centrally from the place of sectioning. If the cause of pain is localized in these cells, then it is possible for intact axial filaments to grow out of these cells. In these cases pain conduction may persist despite the Frazier operation. Authors found relapses in 8% of the cases. (14 References, mainly Western.)

1/1

GUNIYA, T. K.

Cand Agr Sci - (diss) "Effect of magnesium fertilizers on the harvest potential of tobacco under conditions of podzol and peat soils of Abkhazia." Tbilisi, 1961. 20 pp; (Ministry of Agriculture Georgian SSR, Georgian Order of Labor Red Banner Agricultural Inst); 180 copies; price not given; (KL, 5-61 sup, 197)

GUNKA, K.

Transistor PI and PID regulator. Automatizace 5 no.11:316 N '62.

GUNKA, Karel, inz.

Use of the extremum regulator for push furnace combustion control.
Automatizace 6 no.1:22 Ja '63.

GUNKA, Karel, inz.

Continuous measurement of the liquid level. Automatizace
6 no.10:265 0 '63.

GUNKA, Karel, inz.

Position signalization of the agglomeration mixture quantity
behind the agglomeration bolt edge. Hnt listy 18 no.10:732-733
0 '63.

L 59603-65

ACCESSION NR: AP5020426

CZ/0034/64/000/008/0572/0573

AUTHOR: Guska, Karel (Engineer)

TITLE: Conductivity level indicators in an agglomeration production

SOURCE: Hutnické listy, no. 8, 1964, 572-573

TOPIC TAGS: foundry equipment, isotope, liquid level instrument, industrial instrument, transistorized amplifier

ABSTRACT: The author discusses other methods of level indication used generally in storage hoppers, such as dip sticks, and isotopes. He recommends to use electrically conducting bars lowered to various levels through the top cover of the hopper. The resistance between the hopper wall and the bar will be lower, when damp material reaches the bottom of the bar. Such resistance is amplified by a transistor amplifier. The level indicators designed by the author have operated successfully for the last 6 months. Orig. art. has: 5 figures.

ASSOCIATION: Odbor automatizace a mechanizace v Trineckých železárnách VRSR
(Department of Automation and Mechanization of the Trinec Ironworks, VRSR)

Card 1/2

L 59603-65

ACCESSION NR: AF5020426

SUBMITTED: 00

ENCL: 00

SUB CODE: IE, EC

NR REF ROW: 000

OTHER: 000

JPRS

Card

2/2

100-14-56

ACC NR: AP6034280

SOURCE CODE: CZ/0034/66/000/005/0303/0305

AUTHOR: Gunka, Karel (Engineer)

23
E

ORG: Trinec Iron Works VRSR (Trinecke Zelezarny VRSR)

TITLE: Use of ¹⁹neutron damping method for the determination of water in sintering mixtures

SOURCE: Hutnicke listy, v. 21, no. 5, 1966, 303-305

TOPIC TAGS: sintering, metallurgy

ABSTRACT: A hygrometer arrangement based on the principle of neutron damping was tested in the laboratory and in the plant of the Trines Iron Works in determination of water in the sintering mixture. The water content of the mixtures varied between 6 and 9%. The results were within the limits $\pm 0.55\%$ of the true water content. This accuracy is satisfactory for the application in sintering mixtures. Orig. art. has: 4 figures and 1 table. [Based on author's Eng. abst.] [JPRS: 36,867]

SUB CODE: 13 / SUBM DATE: none / ORIG REF: 002 / OTH REF: 001

Card 1/1

fv

UDC: 622.785

0221 0207

YARGOSH, B.I.; KORDIYAK, Yu.Ye.; GUN'KA, N.D.

Features of the tectonic structure and oil and gas potentials
of the Northern Dolina, a new oil field. Neft' i gaz, geol. i
geofiz. no.4:14-19 '63 (MIRA 17:7)

1. Institut geologii goryshchikh iskopayemykh AN UkrSSR i Bo-
lekhovskaya kontora kurennya tresta "Stanislavbarnet".

KEROPYAN, Kirill Kirillovich, doktor tekhn.nauk, prof.; SELIKHOVA,
Klavdiya Dmitriyevna, assistant; GUNKIN, Ivan Ivanovich,
assistant

Use of electric simulation for calculating plane rigid frames
with inclined elements. Izv. vys. ucheb. zav.; elektromekh.
4 no.3:63-72 '61. (MIRA 14:7)

1. Rostovskiy inzhenerno-stroitel'nyy institut (for Keropyan).
2. Kafedra soprotivleniya materialov Rostovskogo inzhenerno-
stroitel'nogo instituta (for Selikhova, Gunkin).
(Electromechanical analogies)
(Structural frames)

KEROPIAN, K.K., prof., doktor tekhn. nauk, red.; PUKHOV, G.Ye.,
prof., doktor tekhn. nauk, red.; UGODCHIKOV, A.G., prof.,
doktor tekhn. nauk, red.; SADETOV, S.Ya., dots., kand. tekhn.
nauk, red.; GUNKIN, I.I., assistant, red.; CHEGOLIN, P.M., dots., kand.
tekhn. nauk, red. (Minsk)

[Proceedings of the Inter-University Conference on Electric
Modeling of Problems of Structural Mechanics, Theory of
Elasticity, and Strength of Materials] Trudy Mezhvuzovskoi
nauchno-tekhnicheskoi konferentsii po elektricheskomu modeli-
rovaniyu zadach stroitel'noi mekhaniki, teorii uprugosti i
soprotivleniya materialov. Pod red. K.K. Keropiana i A.G.
Ugodchikova. Novochoerkassk, Rostovskii inzhenerno-stroitel'-
nyi in-t, 1962. 176 p. (MIRA 17:4)

1. Mezhvuzovskaya nauchno-tekhnicheskaya konferentsiya po
elektricheskomu modelirovaniyu zadach stroitel'noy mekhaniki,
teorii uprugosti i soprotivleniya materialov. 2d, Rostov-na-Donu,
1962. 1 2. Rostovskiy-na-Donu inzhenerno-stroitel'nyy in-
stitut (for Keropyan, Sadetov, Gunkin). 3. Chlen-korrespondent
AN Ukr.SSR i Vychislitel'nyy tsentr AN SSSR (for Fukhov).
4. Gor'kovskiy inzhenerno-stroitel'nyy institut (for Ugodchikov).

GUN'KO, A.F.

GUN'KO, A.F. - "Benthic Fauna of the River Volga in the Region around the Construction Site of the Gor'kiy Hydroelectric Power Plant." Moscow City Pedagogical Inst imeni V. G. Potemkin. Moscow, 1955. (Dissertation for the Degree of Candidate in Biological Sciences)

So; Knizhnaya Letopis', No 3, 1956

AUTHOR: Gun'ko, A. F. 20-119-2-51/60

TITLE: The Influence of the Flow in a Reservoir on the State of the Benthic Fauna (as observed in the Gor'kovskoye Reservoir)
(Vliyaniye protochnosti vodokhranilisheha na sostoyaniye donnoy fauny (na primere Gor'kovskogo vodokhranilisheha))

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 119, Nr 2, pp 372 - 374 (USSR)

ABSTRACT: In order to be able to make universal economic use of the reservoirs now in the process of development, at present much attention is paid to the development of their fauna (References 1-5) . For a few years the author has investigated a section of the Volga in the zone of the dam of the Gor'kiy power plant with regard to the modification of the bottom fauna and its trend of development. The mentioned reservoir, 434 km of length and of a capacity of 10.3 km³, began to fill up in October 1955. The water level rose by 6 m; in spring of 1956, by another 8 m; and by a further rise of 4 m the filling up was finished. Already the 1st

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20-119-2-51/60

**The Influence of the Flow in a Reservoir on the State of the Benthic Fauna
(as observed in the Gor'kovskoye Reservoir)**

rise had slowed down the flow by 60%. Mud and fine loam deposits on the whole surface were intensified by further damming up. The developed reservoir was divided into 2 parts with regard to the speed of flowing through:
a) without flowing through and with weak flowing through with velocities up to 15 cm/second and b) with flowing through velocity exceeding 15 cm/second (former bed of the Volga, starting from 40-50 km upstream of the dam). The modified hydrological regime has determined the direction of development of the bottom fauna. During the 1st winter after the damming up and in the 1st half of the summer the psammophil and rheophil complexes of the river fauna could keep alive (table 1). From the middle of June 1956 the modification of the psammophil complex of the organisms, which so far had covered 90% of the area of the river, became clearly evident. Cryptochironomus -larvae (highly rheophil) almost entirely disappeared. Also the larvae of the Hydropsyche

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20-119-2-51/60

The Influence of the Flow in a Reservoir on the State of the Benthic Fauna (as observed in the Gor'kovskoye Reservoir)

ornatula (lithorheophil) disappeared. At the end of June the colonization of the developed biotopes began. At first it took place near the banks, spreading across the entire reservoir surface towards the end of July. The character of the colonization was essentially influenced by the velocity of flowing through. Towards August all biotopes without or with weak flowing through, in spite of their different original condition (meadows, fields, forests and so on), were densely colonized by larvae of chironomidae (Tendipes) (up to 5610 larvae of a total weight of 23.7 g/m²). In submerged bushes there were also Endochironomus and Procladius. Only the former bed of the Volga in which the flowing through had been maintained remained untouched by this process. Neither then nor later chironomidae and others of the mentioned kinds have appeared here. The chironomidae Tendipes furthermore determined the dynamics of the living mass of the benthos of the biotopes without flowing through; they were the

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20-119-2-51/60

The Influence of the Flow in a Reservoir on the State of the Benthic Fauna (as observed in the Gor'kovskoye Reservoir)

mainpart of the bottom fauna. In the biotopes with flowing through only one atrophied complex of the river fauna remained alive during the whole season of the open water (table 1, figure 1). On the whole the average living mass of the bottom fauna of the wide part of the reservoir has considerably increased at the expense of the biotopes with no or weak flowing through during the first year. The mentioned modifications will have an influence on the development process of the shoals centers in the reservoir. There are 1 figure, 1 table and 5 references, all of which are Soviet.

ASSOCIATION: Institut biologii vodokhranilishch Akademii nauk SSSR (Institute for Biology of Water Reservoirs, AS USSR)

PRESENTED: December 18, 1957, by I. I. Shmal'gauzen, Member, Academy of Sciences, USSR

SUBMITTED: December 17, 1957

Card 4/4

MORDUKHAY-BOLTOVSKOY, F.D.; GUN'KO, A.F.

Bottom fauna of Gorkiy Reservoir during its first year of existence. Trudy Inst.biol.vodokhran. no.2:73-84 '59.
(MIRA 13:5)

(Gorkiy Reservoir--Benthos)

GUN'KO, A.F.

Repopulation of areas free from bottom fauna in the Volga River.
Zool.zhur. 38 no.5:673-683 My '59. (MIRA 12:7)

1. Institute of Water Reservoir Biology, Academy of Sciences of the
U.S.S.R. (Post Office of Borok, Nekouz District, Yaroslavl' region).
(Volga River—Fresh-water fauna)

17 (3), 30 (1)

AUTHOR: Gun'ko, A. F.

SOV/20-127-4-49/60

TITLE: On a Possible Method of Controlling the Feeding Ground of the Fish in the Taganrog Bay of the Azov Sea

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 4, pp 900-902 (USSR)

ABSTRACT: Hydraulic engineering permits the regulation of the conditions in the rivers; thus the levels of biological processes in the river and the waters connected with it can be influenced. It is aimed at explaining the hydrological conditions of the river and affecting them in a way that guarantees high productivity of the waters of this river-system. According to the results of a special investigation in the Taganrog Bay, there is a direct relation between the size of zooplankton in April and the entering conditions of fresh-water from the river Don within the last 6 months. The effect of other factors is not so important. Table 1 shows the fluctuations of zooplankton during the last 12 years. A comparison of data on zooplankton with data on the quantity of liquid discharge within 6 months (Table 1) explains the dependence on account of which a Don discharge over 6 km³ is accompanied by a great quantity of zooplankton in the bay. On account of the parallelism between the discharge fluctuations and

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. On a Possible Method of Controlling the Feeding Ground of the Fish in the Taganrog Bay of the Azov Sea SOV/20-127-4-49/60

the biosubstance of the zooplankton (especially in 1954: discharge of 12 km² did not cause zooplankton increase) it may be assumed that not only the balance of the discharge is concerned but also its course during the 6 months. By means of a general analysis of the Don discharge it could be explained that the quantity of zooplankton in April can to a certain extent be related to the moment of the entering of fresh-water into the bay. Table 2 shows that years of strong zooplankton development (1947, 1951, 1955-58) are characterized by the entering of greater quantities of river water (about 2/3) in the second half of the 6-month-period, i.e. immediately before a heavier development of the zooplankton in April. In years of a weak development of April-plankton the quantity of water entering the bay is approximately equal in both halves of the 6-month-period mentioned. Thus a) a certain extent of river discharge and b) the time of its entering into the bay may be considered the main conditions for a high level of the development of zooplankton which is the most important food of almost all fish in the bay. Table 3 shows the respective relations. There are 3 tables and 3 Soviet references.

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On a Possible Method of Controlling the Feeding Ground of JOV/20-127-4-49/60
the Fish in the Taganrog Bay of the Azov Sea

ASSOCIATION: Azovskiy nauchno-issledovatel'skiy institut rybnogo khozyaystva
g. Rostov-na-Donu (Azov Scientific Research Institute of Fisheries,
Rostov-na-Donu City)

PRESENTED: April 18, 1959, by I. I. Shmal'gauzen, Academician

SUBMITTED: April 17, 1959

Card 3/3

GUN'KO, A.F.

Bottom fauna of the Volga River in the region of Gorkiy Reservoir
before its construction. Trudy Inst.biol.vodokhran. no.4:178-186
'61. (MIRA 14:10)

(Volga region—Benthos)

CUN'KO, A.F.; KARPUS', L.T.; SAMSONENKO, P.A.

Rearing sturgeons at controlled temperatures during the incubation period. Dokl. AN SSSR 141 no.6:1512-1514 D '61. (MIRA 14:12)

1. Azovskiy nauchno-issledovatel'skiy institut rybnogo khozyaystva.
Predstavleno akademikom I.I.Shmal'gauzenom.
(Fish culture) (Sturgeons)

GUN'KO, A.F.; PLESKACHEVSKAYA, T.G.

Results of using *Artemia salina* L. as food in raising acipenserid fry in round basins. Vop. ikht. 2 no.2:371-374 '62. (MIRA 15:11)

1. Azovskiy nauchno-issledovatel'skiy institut rybnogo khozyaystva (AzNIIRKh), Rostov n/Donu.
(Anostraca) (Sturgeons) (Fishes—Food)

GUN'KO, A.F.; ALDAKIMOVA, A.Ya.

Materials on the feeding habits of *Calanipeda aquae-dulcis*
(Crustacea, Calanoida) in the Sea of Azov. Trudy AzNIIRKH
no.633-5 '63. (MIRA 17:8)

GUN'KO, A.F.; NAUMOV, V.M.

Most important problems of the reproduction of sturgeons in the
Azov Sea basin. Trudy VNIRO no. 54:211-221 '64.

(MIRA 18:2)

1. Azovskiy nauchno-issledovatel'skiy institut rybnogo khozyaystva
(for Gun'ko). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut
morakogo rybnogo khozyaystva i okeanografi (for Naumov).

MARFINA, A. M.; NIKITYUK, N. I.; GUN'KO, A. N.

Simplified determining of the concentration of molasses and
flour mash in solvent production. Spirt. prom. 29 no. 3:15-18
'63. (MIRA 16:4)

1. Talitskiy spirtokombinat.

(Saccharimeter) (Starch)

GUN'KO, B.M.

Pulsating stream in the processes of chemical technology. Trudy IGI
16:83-101 '61. (MIRA 16:7)

(Gas flow) (Coal gasification)

ACCESSION NR: AT5004081

AUTHOR: Gun'ko, B. M.

TITLE: Intensification of homogeneous combustion by low frequency vibrations

SOURCE: Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po probleme vibratsionnogo i pul'satsionnogo goreniya. Ist, 1961. Trudy. Moscow, Sektor nauchno-tekhn. inform. GIAP, 1962, 7-19

TOPIC TAGS: combustion process, combustion stability, turbulent flow temperature, flame propagation

ABSTRACT: It is generally accepted that low frequency vibrations intensify the rate of heterogeneous diffusion processes. This intensification is apparently due chiefly to large relative phase velocities. It was important to learn whether there is any reason for the intensification of homogeneous processes in this manner, particularly since the various processes for the combustion of hydrocarbon gases are becoming ever more important in industry. The possible reasons for disturbances in combustion stability which can lead to periodic oscillations are many and may be associated with physical, chemical or aerodynamic effects. The possibilities for existence of these oscillations in a given system are determined not only

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by disruptions in the combustion process, but also by breakdowns in the dynamic equilibrium as a whole. Oscillatory combustion may be regarded as "ordered turbulence" which is a special instance of the general phenomenon of instability in turbulent combustion. In the case of small scale turbulence, the flame propagation velocity increases by $\sqrt{1+2v'/a}$, i.e. is proportional to the relative increase in the area of the front due to small scale pulsations (l is the scale of turbulence, v' is the pulsation velocity, a is the temperature conductivity factor). In the case of large scale turbulence, when the scale of turbulence is greater than the thickness of the flame front, the latter is broken up into separate elements. The spattering of these elements into a fresh mixture leads to a still greater propagation velocity equal to $U_{fr} = \sqrt{1+B(v'/U_n)^2}$, where B is an empirical constant and U_n is the normal flame propagation velocity. In this case the intensification is apparently connected not only with a simple increase in the combustion area, but also with a rapid scattering of the combustion sources with a velocity greater than the normal propagation velocity. Particular attention was given to the effect of pulsation on the incomplete combustion of a fuel mixture. Experiments were conducted with a rotor type interrupter which made it possible to mix the streams completely before they reached the reactor. The results of the experiments are discussed in detail. The experimental results confirm the theoretical prediction

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that the process of homogeneous combustion is intensified by low frequency pulsations and give a qualitative representation of the nature of this effect and the laws governing it.

ASSOCIATION: none

SUBMITTED: 29Dec52

NO REF SOV: 009

ENCL: 00

OTHER: 003

SUB CODE: FP

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GUN'KO, F.G., starshiy nauchn.sotrudnik, kand. tekhn.nauk

Widening of a quiet flow in a rectangular bed. Izv. VNIIG 46:53-62
'51. (MIRA 12:5)

(Hydrodynamics)

GUN'KO, F. G.

Mesh ✓ 1912. Gun'ko, F. G., Energy dissipation below a dam (in Russian), *Gidrotekhn. Stroit.* 22, 9, 27-30, Sept. 1953.

1

GRU'KO, F.G., Doc Tech Sci--(disc) "Linking of ^(reservoirs) of multistage dikes ^(lower) on river flatlands in the ^{operation} performance of ^{the} ^{space} ^{water} ^(under) ^{on} conditions)." Len, 1954. 31 pp with drawings (in of ^{Hydraulic} ^{stations} USSR. Technical Administration of the All-Union Sci Res Inst of ^{Hydraulic} ^{stations} engineering in B.Ye.Vedenev), 200 copies. List of author's works at end of text (11 titles) (IL,47-54, 132)

GUN'KO, F.G., starshiy nauchnyy sotrudnik, kand.tekhn.nauk

Classification of different types of head and tail water
conjugation under spatial conditions for dams with ledges
and level aprons and ledgeless dams with sills at the end
of the apron. Izv.VNIIG 58:85-106 '58. (MIRA 13:7)
(Hydraulics)

GUN'KO, F.G., starshiy nauchnyy sotrudnik, kand.tekhn.nauk

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Izv.VNIIG 59:100-119 '58.

(MIRA 13:7)

(Hydraulic jump)

GUN'KO, F.G., doktor tekhn.nauk

Eighth Congress of the International Association for Hydraulic
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GOV'NO, F.O., doktor nauk, vrak

Calculation of the rock fill strengthening behind the aprons of
spillway dams. Izv. VNIIG 76-109-127 '64. (MIRA 18:1C)

1. GUN'KO, G. K.
2. USSR (600)
4. Roses
7. New method of preparing cuttings of Kazanlyk roses for planting. Sel. 1 sem.
19, No. 10, 1952.
9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

GUN'KO, G.K., kandidat sel'skokhozyaystvennykh nauk (g. Priluki, Chernigovskoy oblasti).

Biology of the rhizome of the peppermint. Agrobiologiya no.1:84-87
Ja-F '57. (MIRA 10:4)

1. Ukrainskaya opytno-selektsionnaya stantsiya VNIEMX.
(Peppermint) (Roots (Botany))

GUN'KO, Grigorii Semenovich.

Cognoscibility of the universe and of its laws. Moskva. Izd-vo Moskovskogo univ., 1954. 36 p.

1. GUMKO, K.S.
2. USSR (600)
4. Filters and Filtration
7. Mechanizing the periodic replacement of filter beds in water-purifying basins., Dum.prom., 27, No.11, 1952

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Vapor-ejector cooler unit, Bum.prom, 29 no.2:18-23 Mr '54. (MLRA 7:5)

1. Glavnyy energetik Kanskogo tsellyulozno-bumazhnogo kombinata.
(Refrigeration and refrigerating machinery)

L 54846-65

EPA(s)-2/EWT(π)/EPF(n)-2/EPF(c)/ENP(t)/ENP(b) Pt-4/Pt-7/Pt-4 LJE(t)

30/16

ACCESSION NR: AP5014486

UR/0032/65/031/006/0656/0657
546.81/156:543,253.06

AUTHORS: Berezina, K. G.; Volkova, L. V.; Gun'ko, Ye. I.

TITLE: The determination of lead and copper microimpurities in sodium chloride by the use of micropolarographic analysis

SOURCE: Zavodskaya laboratoriya, v. 31, no. 6, 1965, 656-657

TOPIC TAGS: microchemical analysis, microchemical analysis equipment, polarographic analysis, salt, impurity content, copper, lead / Orion 7 77 4b Hungarian polarograph

ABSTRACT: A new micropolarographic method was developed for determining the lead and copper microimpurities in common salt. The impurities were first concentrated with sodium diethyldithiocarbamate. The lead and copper complexes were extracted by carbon tetrachloride, and the extracts were concentrated with hydrochloric acid. Nitrogen was bubbled through the solution to remove the oxygen. The polarogram was made on a Hungarian polarograph "Orion -7-77-4b" with a galvanometer sensitivity of $3 \cdot 10^{-9}$ a/mm. In a 100-g sample the minimum quantities were

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0.1 micrograms of lead and 0.3 of copper. By adding known amounts of lead and tin impurities to salt, it was established that the determination error was $\leq 20\%$. The method can be used for determining lead and tin impurities in calcium chloride, lithium chloride, and others. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: GC

NO REF SOV: 001

OTHER: 001

Card

2/2

GUN'KOV, V.

New objectives lie ahead. Grazhd.av. 20 no.2:13 F '63. (MIRA 16'3)

1. Pomoshchnik nachal'nika Politicheskogo upravleniya Grazhdanskogo
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(Aeronautics, Commercial) (Communist Youth League)

GUNMAN, J.

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p. 112 (Energia Es Atomtechnika) Vol. 10, no. 2/3, May/June 1957
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SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

GUNNE, Kh. E., TUMUL'KAN, A.D., EYMANS, I.A., and YANUSHKOVSKIY, V.A.

"Radioactive Inspection Signaling, and Recording Devices," from the book-
(Physics and Techniques of Radioisotopes), works of the Institute of Physics,
Vol 9, edited by Ya. E. Chudars, Candidate of Physicomathematical Sciences;
I. M. Taksar, Candidate of Physicomathematical Sciences; and L. L.
Pelekis, Riga, Publishing House of the Academy of Sciences Latvian SSR, 1956,
165 pp

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